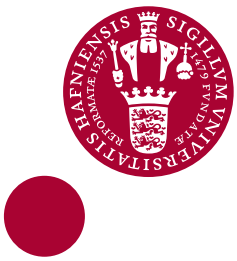

Playing video games promotes overconsumption of food

a randomized crossover study in adolescents

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and weekends, respectively. There was no relationship between weight category (underweight, healthy weight, overweight, obese) and hours of sleep on weekdays (p = .59) or weekends (p = .48). Similarly, there was no relationship between BMI z-score and hours of sleep on weekdays (p = .94) or weekends (p = .06). These data suggest that sleep duration is not associated with weight status among ethnically diverse 6th-8th grade students.

182-P
Breakfast Consumption Among Low-Income, Ethnically Diverse 6th-8th Graders

Tara Alexis McCoy, Kelley E. Borradaile, Alexis Wojtanowski, Amy Virus, Stephanie S. Vander Veur, Sandy B. Sherman, Brianna Sandoval *Philadelphia, PA;* Gretchen Van Wye *New York, NY;* Joan Nachmani, Gary D. Foster *Philadelphia, PA*

There are growing efforts to increase school breakfast consumption. However, the frequency of breakfast consumption outside of school is unknown. The purpose of this study was to assess morning food and drink consumption patterns among ethnically diverse 6th-8th graders. Data were obtained from 10 K-8 schools where (mean ± SD) 82.1 ± 7.4% of students were eligible for free or reduced price meals. Heights and weights were measured and participants self-reported (in the morning before lunch) whether they had eaten or drunk anything that morning from: home; corner store/restaurant; school cafeteria; or classroom. Participants (n = 457) were 56.5% female, predominantly African American (36.8%) or Hispanic/Latino (34.4%), with a mean age (mean ± SD) of 13.0 ± 1.0 y. Almost half were overweight (18.6%) or obese (29.3%). Approximately 25% (23.6%) reported consuming no food or drink, 47.9% reporting consuming food or drink from one location, and 28.4% reported consuming food or drink from ≥ 2 locations on that morning. Differences between students who did or did not consume anything in the morning were assessed using general linear models and Cochran-Mantel-Haenszel statistics after controlling for school. There were no differences between these two groups with respect to age (p = .93), gender (p = .86), race/ethnicity (p = .22), or weight category (p = .94). Efforts to increase school breakfast consumption should consider the significant variability of morning food or drink consumption among low-income, ethnically diverse children.

183-P
Psychological Distress May Decrease Strength of Self-regulation in Obese Adolescents in CBT Immersion Treatment

Daniel Kirschenbaum, Kristina Pecora Kelly *Chicago, IL;* Julie Germann *Dallas, TX*

The results of numerous studies indicate that psychological distress negatively impacts success in weight control. However, the mechanisms by which this occurs remain unclear. The present study included obese young people enrolled in two Wellspring Camps, a cognitive-behavior therapy (CBT) immersion treatment. We tested the hypothesis that psychological distress negatively impacts effortful self-regulated behaviors during weight loss. Participants in Wellspring Camps during 2009 (n= 252; 90.9% female; M age=15.7; M BMI= 36.0; M % overweight = 68.8; M attendance = 5.8 weeks) received a very low-fat diet, a goal of >10,000 steps per day, and intensive CBT. Initial assessments included BMI, psychological distress, binge eating, and 48-hour dietary recall. Process measures assessed consistency of self-monitoring and journaling and number of steps recorded daily on pedometers. Results indicated that participants very significantly improved (all Ps<.0001): % overweight (Ms= initial 69% to end 53%), psychological distress, and fitness (M reduction in timed mile= 16.2 m to 13.6 m). Hierarchical multiple regression analyses showed that elevated initial psychological distress (which was correlated with binge eating) predicted decreased consistency of self-monitoring and decreased activity levels. The powerful impact of the intervention (rate of weight loss 300% higher than typically reported for outpatient treatment) may have obfuscated the potential impact of initial distress on weight change during camp. However, prior research suggests that the degree of reduction in strength of self-regulation that was observed during treatment (especially decreased self-monitoring) may well predict failure in the long run for some of those who began treatment with elevated levels of psychological distress. A 1-year follow-up is in progress.

184-P
Parent Behavioral and Environmental Changes Associated With Weight Loss in Obese Children

Kerri Boutelle, Guy Cafri *La Jolla, CA;* Scott Crow *Minneapolis, MN*

A comprehensive behavioral treatment program for childhood obesity includes a focus on improving parenting skills and behaviors, however, there is no data as to which of these is most effective. Eighty obese children and their parents participated in a 5-month behavioral treatment program, as part of a trial comparing a parent-only to parent+child treatment. Measures were administered at baseline, post-treatment, and 6-month follow-up. Outcome measures were BMI and BMI-Z. Predictors were time, condition, time by condition interaction, gender, household income, weighing frequency, home food environment, parenting style, parent caloric intake, parent physical activity level, restriction of child intake, encouragement of child, doing activity with child, and parent BMI. Analyses showed the only significant predictor of child weight loss was parent BMI. For child BMI as the outcome, the effect of parent BMI was b =.343, p < .001, 95% confidence interval: (.90, .496). A within-subjects interpretation suggests that changes in parent BMI are associated with a change in their child's BMI. Specifically, a 1 unit decrease in parent BMI is associated with a .343 reduction in child BMI, controlling for all other variables in the model. A similar effect was observed when BMI-Z was the outcome. These results are consistent with other studies which identify parent weight loss as the best predictor of child weight loss. Future intervention studies should focus on parent weight loss to improve child weight loss.

185-P
Playing Video Games Promotes Overconsumption of Food: A Randomized Crossover Study in Adolescents

Jean-Philippe Chaput, Trine Visby, Signe Nyby, Lars Klingenberg, Nikolaj T. Gregersen *Copenhagen, Denmark;* Angelo Tremblay *Quebec, Canada;* Arne Astrup, Anders M. Sjödin *Copenhagen, Denmark*

Objective: To examine the acute effects of playing video games on various components of energy balance. Methods: Using a randomized crossover design, 22 healthy, normal weight male adolescents (mean ± SD age: 16.7 ± 1.1 years) completed two 1 hour experimental conditions, namely video game play and rest in a sitting position, followed by an ad libitum lunch. The primary endpoints were spontaneous food intake, energy expenditure, stress markers, and appetite sensations. Results: Heart rate, systolic and diastolic blood pressure, and mental workload were significantly higher during the video game play condition compared to the resting condition (P<0.01). Energy expenditure was significantly higher during the video game play condition compared to resting (mean increase over resting: 89 kJ, P<0.01). Ad libitum energy intake after the video game play condition exceeded that measured after rest by 335 kJ (P<0.05), resulting in a positive energy balance of 246 kJ (59 kcal, P<0.05) after one hour of video game play. Interestingly, the eating speed was the same for both conditions. The increase in food intake associated with playing video games was also observed without increased feelings of hunger and was not compensated for during the rest of the day. Conclusions: A single session of video game playing promotes overconsumption of food regardless of appetite sensations. Future studies should address whether the "eating in the absence of hunger" associated with the practice of seated video games is more related to an impairment in satiety signals capacity or to the mental-stress-induced reward system.

186-P
Lifestyle Intervention Using Interactive Guided ImagerySM (IGI) Increases Intuitive Eating (IE) Behaviors Which Are Associated With Reduced Adiposity In Obese Latina Female Adolescents

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Background: Intuitive eating is a non-dieting, health-promoting approach to food choices and physical activity. IGI is a mind-body therapeutic modality that holds promise for motivating behavioral change. Objectives: 1. To determine effects of a randomized, 12-week pilot lifestyle + IGI intervention in obese Latino adolescents on measures of IE; 2. To determine whether intervention-induced changes in IE are related to changes in adiposity Methods: Obese Latino teens (14M/15F, age 15.3±0.9, BMI 35.9±5.2) received 12 weekly lifestyle education classes promoting IE behaviors, and